

Section 6.3, 6.4, and 6.5 Quiz Review

Date _____ Period _____

Simplify.

1) $-3\sqrt{5} - 3\sqrt{5}$

2) $-2\sqrt{27} - 2\sqrt{3}$

3) $-\sqrt{3} + 2\sqrt{12}$

4) $-3\sqrt{2} - \sqrt{18}$

5) $\sqrt[3]{16} - \sqrt[3]{2}$

6) $\sqrt{3}(\sqrt{3} + \sqrt{6})$

7) $\sqrt{2}(2 + \sqrt{2})$

8) $\frac{8\sqrt{6} - 2\sqrt{3}}{2\sqrt{3}}$

Simplify.

9) $(\sqrt{2} + \sqrt{7})^2$

10) $(5 + \sqrt{3})(2 + \sqrt{3})$

$$11) (4 - 5\sqrt{5})(1 - 3\sqrt{5})$$

$$12) \frac{5}{\sqrt{3} + \sqrt{5}}$$

$$13) \frac{2}{3 + 4\sqrt{3}}$$

$$14) \frac{5 - 5\sqrt{2}}{-3 + \sqrt{2}}$$

Solve each equation. Remember to check for extraneous solutions.

$$15) 3 = \sqrt{3n}$$

$$16) 8 = \sqrt{11x - 2}$$

$$17) \sqrt{x} = \sqrt{3x - 12}$$

$$18) n = \sqrt{20 - n}$$

$$19) \sqrt{5 - n} = n - 5$$

$$20) -x + \sqrt{6x + 15} = 4$$